

Interview Summary

Application No.

08/266,154

Applicant(s)

Morrison et al

Examiner

Julie E. Reeves, Ph.D.

Group Art Unit

1806



All participants (applicant, applicant's representative, PTO personnel):

(1) Julie E. Reeves, Ph.D.

(3) _____

(2) Vicki Veekner

(4) _____

Date of Interview Oct 22, 1997Type: ☒ Telephonic ☐ Personal (copy is given to ☐ applicant ☐ applicant's representative).Exhibit shown or demonstration conducted: ☐ Yes ☒ No. If yes, brief description:Agreement ☐ was reached. ☒ was not reached.Claim(s) discussed: all pending

Identification of prior art discussed:

none

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Applicants prefer the scope of the term "lymphoid" in place of "lymphocyte" as they felt that the plasma cell J558L and P3 used in the examples would not be encompassed by the term "lymphocyte". Examiner pointed out that the specification does not provide support for lymphoid cells and that the art recognized definition of lymphoid is rather vague. Examiner suggested that the specification may provide support for the lymphocyte lineage which may encompass plasma cells or that the references used to describe J558L and P3 may mention that the myeloma is a tumor cell of a plasma cell because these cells make portions of immunoglobulins prior to transfection. The final paragraph of the specification provides support for incorporation by reference. Applicants will try to submit renumbered and amended claims by November 5th.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

1. ☐ It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2. ☐ Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

Examiner Note: You must sign and stamp this form unless it is an attachment to a signed Office action.

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96 78

A method for producing a functional immunoglobulin comprising a heavy chain and a light chain, which comprises the steps of:

(a) transfecting a transformed mammalian lymphocytic cell with a first DNA molecule coding for a first chain of the immunoglobulin;

(b) transfecting the cell with a second DNA molecule, said second DNA molecule coding for a second chain of the immunoglobulin, said second chain being a chain other than the first chain and said first and second chains being either the heavy chain or the light chain; and

(c) maintaining the cell in a nutrient medium, so that the cell expresses the first and second DNA molecules and the resultant chains are intracellularly assembled together to form the immunoglobulin which is then secreted in a form capable of specifically binding to antigen

wherein prior to step (a) the cell does not express a functional immunoglobulin capable of specifically binding antigen.

97 79

A method as recited in claim 78 wherein the cell is transfected via protoplast fusion.

96 78

98 80

A method as recited in claim 78 wherein the cell is transfected via calcium phosphate precipitation.

99 43

A method as recited in claim 78 wherein the cell is a myeloma cell.

100 44

A method as recited in claim 43 wherein the cell is a murine myeloma cell.

99 43

101 81

A method as recited in claim 78 wherein the cell does not endogenously produce any immunoglobulin chains.

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102 ~~46.~~

¹⁰¹
A method as recited in claim ~~81~~ wherein the cell is a murine P₃ cell.

103 ~~82.~~

⁹⁶
A method as recited in claim ~~78~~ wherein prior to step (a) the cell endogenously produces an immunoglobulin light chain or an immunoglobulin heavy chain, but not both.

104 ~~48.~~

¹⁰³
A method as recited in claim ~~82~~ wherein the cell is a murine J558L cell.

105 ~~83.~~

⁹⁶
A method as recited in claim ~~78~~ wherein the immunoglobulin comprises the variable region found in a first mammalian species and comprises the constant region found in a second mammalian species, said second mammalian species being other than the first mammalian species.

106 ~~84.~~

A method for producing a functional immunoglobulin comprising a heavy chain and a light chain, which comprises the steps of:

(a) transfecting a transformed mammalian lymphocytic cell with a plasmid comprising a first DNA molecule coding for a first chain of the immunoglobulin and a second DNA molecule coding for a second chain of the immunoglobulin, said second chain being a chain other than the first chain and said first and second chains being either the heavy chain or the light chain; and

(b) maintaining the cell in a nutrient medium so that the cell expresses said first DNA molecule and said second DNA molecule and the resultant chains are intracellularly assembled together to form the immunoglobulin which is then secreted in a form capable of specifically binding to antigen

wherein prior to step (a) the cell does not express a functional immunoglobulin capable of specifically binding antigen.

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107 ~~85~~. A method as recited in claim ~~84~~¹⁰⁶ wherein the cell is transfected via protoplast fusion.

108 ~~86~~. A method as recited in claim ~~84~~¹⁰⁶ wherein the cell is transfected via calcium phosphate precipitation.

109 ~~87~~. A method as recited in claim ~~84~~¹⁰⁶ wherein the cell is a myeloma cell.

110 ~~88~~. A method as recited in claim ~~84~~¹⁰⁹ wherein the cell is a murine myeloma cell.

111 ~~89~~. A method as recited in claim ~~84~~¹⁰⁶ wherein the cell does not endogenously produce any immunoglobulin chains.

112 ~~90~~. A method as recited in claim ~~87~~¹¹¹ wherein the cell is a murine P₃ cell.

113 ~~91~~. A method as recited in claim ~~84~~¹⁰⁶ wherein prior to step (a) the cell endogenously produces an immunoglobulin light chain or an immunoglobulin heavy chain, which endogenously-produced heavy chain is not secreted in a form capable of specifically binding to antigen, but not both.

114 ~~92~~. A method as recited in claim ~~88~~¹¹³ wherein the cell is a murine J558L cell.

115 ~~93~~. A method as recited in claim ~~84~~¹⁰⁶ wherein the immunoglobulin comprises the variable region found in a first mammalian species and comprises the constant region found in a second mammalian species, said second mammalian species being other than the first mammalian species.

116 ~~94~~. A method for producing a functional immunoglobulin comprising a heavy chain and a light chain which comprises the steps of:

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(a) maintaining in a nutrient medium a transformed mammalian lymphocytic cell, said cell having been transfected with a first DNA molecule coding for a first chain of the immunoglobulin and a second DNA molecule coding for a second chain of the immunoglobulin, said second chain being a chain other than the first chain and said first and second chains being either the heavy chain or the light chain;

(b) expressing from said cell the heavy chain and the light chain functionally assembled together to form said immunoglobulin which is then secreted in a form capable of binding antigen; and

(c) recovering said immunoglobulin wherein prior to being transfected, the cell does not express a functional immunoglobulin capable of specifically binding antigen.

117 ~~91~~. A method as recited in claim ~~90~~¹¹⁶ wherein the cell is transfected via protoplast fusion.

118 ~~92~~. A method as recited in claim ~~90~~¹¹⁶ wherein the cell is transfected via calcium phosphate precipitation.

119 ~~93~~. A method as recited in claim ~~90~~¹¹⁶ wherein the cell is a myeloma cell.

120 ~~94~~. A method as recited in claim ~~91~~¹¹⁹ wherein the cell is a murine myeloma cell.

121 ~~95~~. A method as recited in claim ~~90~~¹¹⁶ wherein the cell does not endogenously produce any immunoglobulin chains.

122 ~~96~~. A method as recited in claim ~~93~~¹²¹ wherein the cell is a murine P₃ cell.

123 ~~97~~. A method as recited in claim ~~90~~¹¹⁶ wherein prior to being transfected the cell endogenously produces an immunoglobulin light chain or an immunoglobulin heavy chain, but not both.

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124 26.

123

A method as recited in claim 94 wherein the cell is a murine J558L

cell.

125/95.

116

A method as recited in claim ~~90~~¹¹⁰ wherein the immunoglobulin

comprises the variable region found in a first mammalian source and comprises the constant region found in a second mammalian species, said second mammalian species being other than the first mammalian species.

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The cells were grown in the presence of 100 mg/l of tetracycline. The cell concentration was determined by optical density at 600 nm. The cells were then transformed with the *Agrobacterium* strains. The transformation efficiency was determined by the number of transformants per 10⁶ cells. The data are the mean \pm SD of three independent experiments.